UNITED S TES ENVIRONMENTAL PROTECTION A NCY

AUG 08 1988

EXPRESS MAIL
RETURN RECEIPT REQUESTED

William L. Warren
Cohen, Shapiro, Polisher, Sheikman & Cohen
997 Lenox Drive - Building 3
Lawrenceville, NJ 08648

Re: SCP - Carlstadt Site
Administrative Orders, Index
Nos. II-CERCLA - 50114 and II-CERCLA - 60102

Dear Mr. Warren:

Attached you will find EPA's Comments on the Dratt On-Site Remedial Investigation Report submitted to EPA by Dames & Moore on April 20, 1988.

Pursuant to paragraph 26.E and 25.E ot the above-referenced Administrative Orders, respectively, EPA is available to meet with you to discuss these comments within 5 business days of your receipt of this letter. Should you not request a meeting to discuss these comments, these comments will be deemed the "final comments" pursuant to paragraphs 26.E and 25.E, above, and an amended Remedial Investigation Report addressing these comments should be submitted to EPA within 30 days of your receipt of this letter.

If you have any questions, or would like to arrange a meeting to discuss these comments, please contact Janet Feldstein or James Schmidtberger, ot my staff, at (212) 264-2646.

Sincerely yours,

John V. Czapor, Chief
Site Compliance Branch

Attachment

cc: Thomas Armstrong, General Electric Co.
Medhat Reiser, Nepera, Inc.
Gerard Coscia, Dames & Moore
Pamela Lange, NJDEP

003723

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★U.S.GPO:1988-0-206-471

SCP-Carlstadt
Draft On-site Remedial Investigation

General Comments

The presentation of site characterization is inadequate. The report presents data collected during the RI without sufficient detail and analyses.

For chemical data, usually only mean concentrations of classes of compounds are presented, with no discussion of the standard deviation. Inorganic parameter concentrations are rarely provided in the text. Temporal variation and spatial distribution of individual chemical parameters within and among various site media are inadequately discussed, or not discussed at all. Correlations of chemical contaminants to known processes/storage area at the site was not performed. There is inadequate discussion of interrelationships between chemical parameters in the various media sampled. There is no discussion of QA/QC sample results (field blanks, trip blanks, and split samples by EBASCO).

The hydrological characteristics of the site were not completely addressed. Groundwater, surface water and tidal flow data, and the interconnections between aquifers/surface waters were not clearly discussed. Some of the conclusions related to hyrdraulic characteristics of the underlying aquifers need to be explained in more detail.

As has been make clear to Dames & Moore, it is necessary that the report contain a public health assessment, an environmental-receptors endangerment assessment, a section describing ARARs and a section defining remedial objectives. The Public Health Assessment/Endangerment Assessment when finalized, should be incorporated into this report. The ARARs, which were provided to the committee on July 27, should also be incorporated. Some remedial action objectives were identified in the submittal on the first phase of the Feasibility Study, however this section must be expanded for inclusion in the Draft FS Report.

It is appropriate that Dames & Moore utilize the new version of EPA's RI/FS Guidance, dated March 1988, (previously provided) to prepare revisions to the Draft RI and prepare the Draft FS Report. This Guidance contains useful information regarding what should be included in the Reports, and provides guidance which should help Dames & Moore to expand their data analyses and discussion of the nature and extent of contamination at the site.

Specific Comments

Executive Summary

Paragraph 2: Remove the phrase "if any" (also on page 2).

Paragraph 3: Revise wording throughout paragraph. The phrase "chemical substances" is too vague. Revise to either "hazardous substances, as defined by CERCLA...", or "chemical contaminants." This should be modified throughout the Report.

The comparison of concentrations ("substantially lower" and "relatively low") is also excessively vague. Be more specific in the Executive Summary.

Page 3

Paragraph 1: The tank currently contained in the roll off container, "T-5", has not been patched with epoxy sealants and makeshift wooden braces.

Pages 4,5

The phrase "chemical substances" is also excessively vague. (See comment on Executive Summary, above.)

Page 6

The closest residences should be located on one of the figures.

Page 8

Section 2.3.3 entitled "Biota" is presently inadequate. The references cited are more than 12 years old. More current information should be utilized to perform an assessment of biota at the site. An inventory of biota within Peach Island Creek and the surrounding wetlands should be performed, with field verification by qualified personnel. This assessment may be done as a part of the off-site Remedial Investigation, as it will be necessary to identify the impacts to biota from contamination migrating from the site. (Refer to comments on proposed Revision No. 8 to Project Operations Plan, dealing with Off-Site RI, transmitted separately.)

Page 9

The information on area wells should be updated. Dames & Moore must gather more precise information regarding well use in the area.

Page 10

Dames & Moore should obtain more current information regarding till aquifer use, as well. No support is provided for the statement made at the top of this page, i.e., numerical data, further explanation.

Pages 12,13

Line 10: Change "biphenols" to "biphenyls", add (PCBs).

Line 17: What is meant by undisturbed? - explain.

Paragraph 4: The discussion of Octanol/Water partition coefficient is not clear. Soil is not an organic phase. The generalizations made regarding the relationship between the Octanol/Water partition coefficient and other parameters are not always true. Revise this section.

Page 13

Paragraph 2: Soil/Sediment Adsorption Coefficient should be clearly defined, including formula and units used. References should be cited.

Paragraph 4: Explain the mobility index, including the phrase "logarithmic ratio", and give units.

Pages 16-18

The thicknesses of the strata should be described in these sections.

Page 17

The "sand unit" is not shown on Figure 6. Explain how "channel scour-and-fill" could occur.

Page 18

The seismic refraction data should be included in the revised On-Site RI Report. In addition, a Bedrock investigation should be included, "on-site", as it may be necessary to properly evaluate on-site remedial alternatives. Further on-site work may be conducted as a phase II RI, i.e., a type of treatability study.

Page 19

Some borings were drilled using mud-rotary drilling, not wash-rotary. These borings/wells should be identified.

Pages 23-28

The discussion of Soil Quality should include a more detailed description of chemicals found, rather than simply referring to Figures 10-21 and "classes" of compounds. Maximum concentrations, in addition to mean values, must be discussed in this text. This is true for sections relating to other media, as well. All sections must be expanded to adequately delineate and characterize the extent of on-site contamination.

Pages 26-27

The levels of metals detected must be discussed.

Page 26

The statement that concentrations of less mobile chemicals are lower at the top-of-clay than at the surface ignores a significant exception, found at P-4. This exception, and the implications of it, must be discussed.

The conclusions in the third paragraph are questionable. High levels of all classes of contaminants exist throughout the site, at varying depths. In some locations (B-1, MW-3S and MW-4S), base/neutrals are higher at 5-6 feet than at the surface. Lead concentrations were higher at 5-6 feet than at the surface at locations B-3, B-6 and MW-2. Many other exceptions exist. Generalized statement are not appropriate without more detailed explanations.

Page 27

Boring P-4 is a significant exception to the last complete statement on this page. This should be noted. In addition, borings MW-2 and MW-5 show concentrations rising with depth. This must be discussed.

The sentence about metals that begins on this page has some significant exceptions, including the copper concentration of nearly 1.2% at B-1, and the mercury concentration of 13.6 ppm at P-3, both detected at 5-6 feet.

Pages 27-28

The mean values presented here appear to be miscalculated. NJDEP staff has performed some mean calculations and come up with figures of 4.05 mg/kg PCB-arochlor 1242 vs. Dames & Moore's figure of 0.187 (RMW-7D). Similarly, NJDEP calculated petroleum hydrocarbon means at RMW-2D and -5D as 3,237 and 16,228 mg/kg, respectively, vs. Dames & Moore's values of 77 and 88 mg/kg. An explanation of Dames & Moore's methods for calculation of mean concentrations, as well as an explanation for these discrepencies,

should be submitted. All means presented in this report should be recalculated and verified.

Page 29

The information submitted on July 19, 1988, in Addendum No. 2, should be incorporated into the discussion in this section. EPA still believes it is unlikely that the sewer lines could effect shallow groundwater flow across the entire site, or that the mosquito control trenches have a large impact on shallow flow. Dames & Moore indicates it is likely these trenches were back-filled with material similar to that present throughout the site, further implying that the trenches would have minimal impact on groundwater flow.

The Report, as well as Addendum No. 2, fail to provide adequate explanation of the flow patterns shown on the contour maps.

Page 30

The tidal staff measurement results should be presented and discussed further. Explanation of how Dames & Moore reached the conclusion that the shallow aquifer is not affected by tides should be provided.

Page 32

Discuss other chemicals detected in shallow groundwater, in addition to the three compounds noted for MW-7S.

Expand the last paragraph on this page to include further explanation of why cleanup procedure was used for resampling. This paragraph is unclear.

Page 33

Discuss the concentrations of metals detected in the groundwater.

Page 34

The first paragraph under the subsection "Hydrogeology" should be expanded to include information indicating that the till aquifer is confined.

The discussion of tidal influences on the till aquifer should be expanded. The results of the data analysis from MW-5D, the correlation analysis of the data, and the tidal charts for the Hackensack River should be presented and thoroughly discussed to support the conclusion that the till aquifer is under strong tidal influence. What is the result of this influence? Does

it effect till aquifer flow? There is no discussion about interconnection between the shallow and till aquifers.

Page 35

Paragraph 1: The downward gradient indicates that a leaky condition exists at the site. The "confining layer" should be identified as such in this section.

Pumping a well dry during development does not necessarily indicate low aquifer permeability. The utilization of mud-rotary methods for drilling may have caused mud cake residuals in the borehole, which could reduce well yield. Provide more information on this point. Also, define how low the permeability is inferred to be.

Change sampling date from July, 1976 to July, 1987.

Discuss which chemicals were detected in the till aquifer, not just broad classes of chemicals.

Discussions of "attentuation" should not be limited to volatiles. Discuss other chemicals detected.

Page 36

Clarify paragraph 2 on this page; give examples.

Total vs. filtered metals analyses are not adequately discussed. Explain variation between July and December results.

There is no summary table for the till aquifer sampling results. Please provide.

Page 37

What is the surface water flow rate? How is this affected by the tide?

The discussion of surface water contamination must be enhanced greatly. The text should discuss which compounds were detected and at what concentrations.

Page 38

Expand discussion of seasonal variations; give examples.

Is there a relationship between substances detected in the surface water and those found in the till aquifer, due to tidal influence? Please discuss.

Page 39

Delete first sentence on this page. The statement is unsubstantiated.

The discussion of sediment quality fails to describe the degree of contamination of sediments. Please quantify contamination. Evaluation of the data should include temporal and spacial trends of sediment deposition. Tidal influences on the concentrations of contaminants should also be discussed.

Page 41

References to upstream sources cannot be substantiated. Revise this discussion.

Page 42

Rewrite sentence "In summary...appear to be... to a certain degree.... are possible." This sentence says nothing, and has no place in a technical report. Place conclusions regarding sediment contamination here, instead.

Page 44

In section entitled Air Investigation, results of all air monitoring should be discussed, in detail. Air monitoring results should be provided in an Appendix.

Tables and Figures

Table 1 and Figure 5 should be updated to reflect current well conditions.

Table 3 should be revised so that the decimal places for the figures are aligned.

Table 12: There is a discrepency between Table 12 and information provided in Appendix B and Figure 38. Table 12 shows petroleum hydrocarbons detected of all four surface water locations, with a mean concentration of 6.9 ppm. Appendix B and Figure 38 indicate petroleum hydrocarbon concentration below detection, 1 or 2 ppm. This discrepency must be corrected.

Figure 6 is almost impossible to read. As recommended previously, Dames & Moore might remove the streets from the Figure and show them as a small insert, to identify the location of the composite section. Also, in the legend, it is nearly impossible to distinguish between the varved clay and the red clay. If possible, approximately depths should be indicated on this Figure.

Why are the replacement borings not shown on Figure 7?

Figures 10-21 and 42-45 should show sample collection dates. Units on Figures 43 and 45 should be mg/kg, not mg/L.